A New Moth of the Genus *Lophotyna* (Noctuidae: Amphipyrinae) from East Nepal[1]

Mamoru OWADA

Department of Zoology, National Science Museum (Nat. Hist.), Tokyo

The lepidopterous fauna of the Nepal Hymalayas is rather poorly known, especially for nocturnal forms, because of the difficulty in making intensive collectings on the steep high mountains. In the autumn of 1979, I had an opportunity to visit Nepal as a member of an expedition made by the National Science Museum, Tokyo. I was fortunate to collect a large number of nocturnal moths in East Nepal, using a light-trap set with a portable generator, and in this collection many interesting autumnal species are included.

In this paper, I am going to describe a new species of the genus *Lophotyna* on the basis of this collection. This genus was erected by HAMPSON (1910) for the type-species, *Mamestra albirena* MOORE, 1867, from Sikkim and Bengal. BOURSIN (1956) discussed on its systematic position and added three more species, *albosignata* (MOORE, 1881) from Punjab and Afganistan, *hoenei* BOURSIN, 1956, from West China, and *crinomima* (WILTSHIRE, 1946) from Iran. In that paper, he illustrated the male genitalia of *albirena*, *albosignata* and *hoenei* (Taf. 31: 6–8), while the right valva and aedeagus of *crinomima* were figured in WILTSHIRE's original description (p. 121, fig. 1).

Judging from all the known collecting data of *Lophotyna*-species, it can be safely surmised that they occur in the autumn; the present new species was also collected in October and November.

Before going further, I wish to express my hearty thanks to Dr. S.-I. UÉNO, under whose leadership this Nepal expedition 1979 was carried out, and also to Dr. Y. KUROSAWA of the National Science Museum (Nat. Hist.), Tokyo, who gave me an opportunity to participate in the project and valuable advice. In the field survey, I am indebted to the authorities of Tribhuvan University, Kathmandu, for permission to conduct research and collect specimens in Nepal. I have also to thank all the members of the expedition for their kind aid and encouragement in the field.

Lophotyna khumbuensis sp. nov.

♂ & ♀. Antenna brown, white in basal portion; ciliate in male, with shorter cilia in female. Head and thorax brown mixed with orange, external edge of tegula white; abdomen reddish grey brown. On the upperside of forewing, ground colour reddish brown; subbasal line dark brown, edged with orange, waved, from costa to submedian fold; antemedial line dark brown, internally edged with orange, waved, concave in cell; claviform stigma orange, bordered by slender dark line, rather small; round orbicular stigma orange, encircled with dark brown slender line, large; reniform stigma orange,

---

[1] This study is supported by the Grans-in-aid for Scientific Research Nos. 404101 and 504301 from the Ministry of Education, Japan.

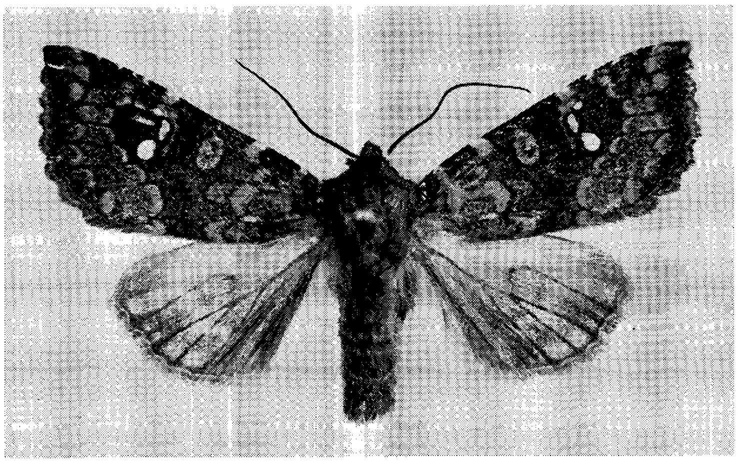


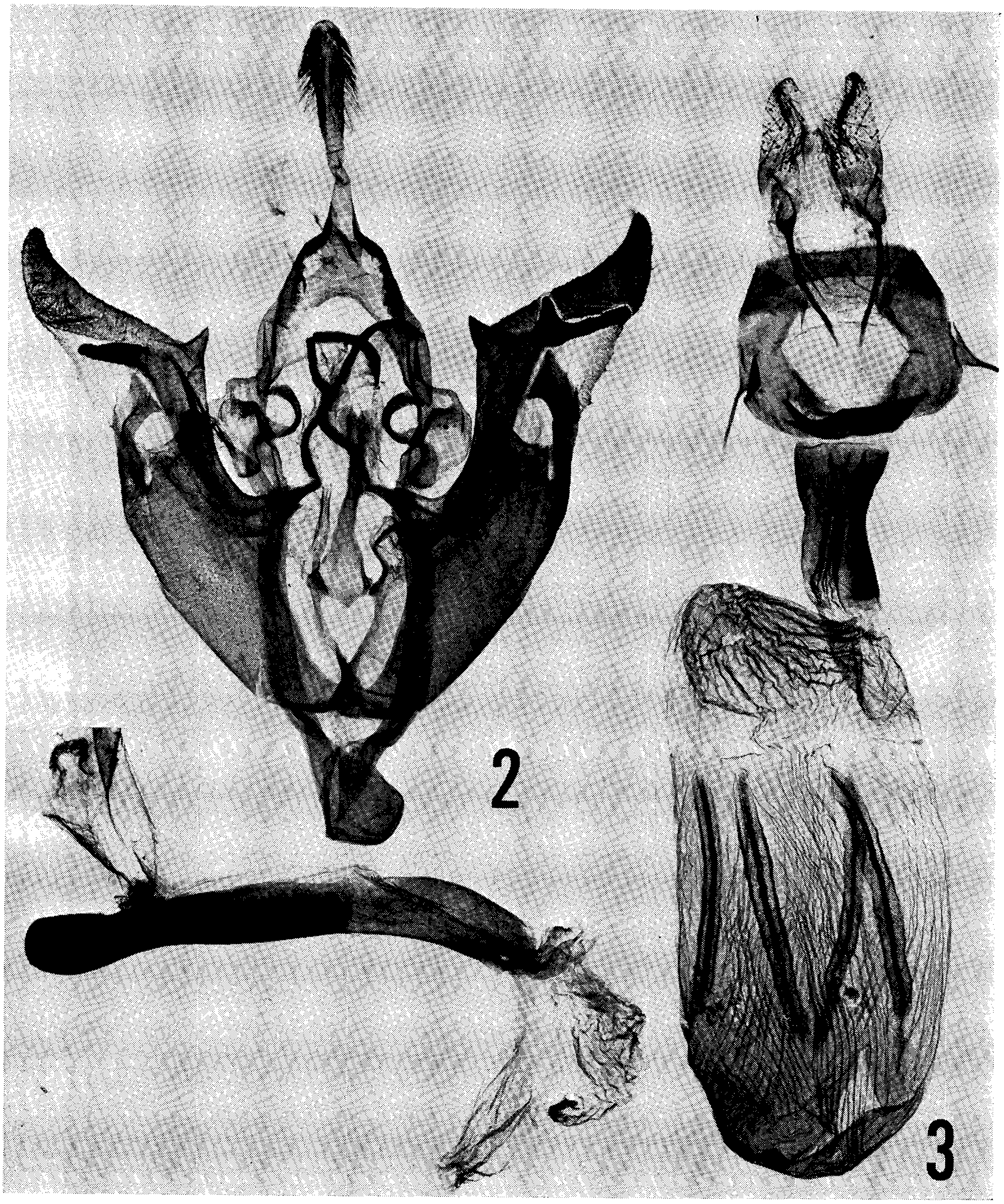
Fig. 1. *Lophotyna khumbuensis* sp. nov., holotype, male.

defined by dark brown line, very narrow, externally with three white marks, upper one minute, middle one ovate and lower one round; postmedial line dark brown, edged with yellowish orange shade on the outer side, bent outwards below costa, then excurved to vein 3 and then incurved, dentate; three whitish points on costa beyond postmedial line; subterminal line dull dark brown, shaded with orange on both the sides, dentate; terminal line dark brown, slender, waved; cilia with rather whitish line at base. Upperside of hindwing fuscous brown, costal area light ochre, terminal area paler than basal area, veins stained with dark brown, terminal line dull fuscous; cilia pale reddish brown with rather whitish basal line. Underside of wings pale ochre, costal and terminal area with reddish scales; discocellular lines black; postmedial lines dark brown, vanished towards dorsum; terminal lines and cilia almost the same as on the upperside.

Male genitalia (Fig. 2). Uncus flattened, gradually broadened towards rounded apex. Tegumen moderate, socius large. Vinculum moderate, succus developed. Valvae slightly asymmetrical; costa sclerotized, terminating in strong triangular projection; ampulla of right valva biforked and that of left valva not forked; cuculus not sclerotized, slightly curved dorsally; succulus well developed, right succulus slightly smaller than the left. Juxta slender, transtilla with a pair of long narrow sclerotized ridges. Aedeagus cylindrical, almost straight; vesica slightly scobinate, without prominent cornutus.

Female genitalia (Fig. 3). Papillae anales and 8th abdominal segment moderate, apophyses anteriores about a half as long as apophyses posteriores. Ostium bursae slightly invaginate, internally scattered with micro-spines. Ductus bursae flattened, scattered with micro-spines, dorsally with several longitudinal furrows. Corpus bursae long ovate, with many furrows, four lingitudinal long signa of almost the same length.

Type-series. Holotype: ♂ (Fig. 1), labeled "Junbesi 2,670 m, Solukhumbu, Sagarmatha, E Nepal, 10–11. X. 1979, M. OWADA." Paratypes: 1 ♂, Ringmo 2,780 m, Solukhumbu, Sagarmatha, 9. X. 1979 (M. OWADA); 6 ♂ 2 ♀, same data as holotype; 1 ♀, Sete 2,600 m, Solukhumbu, Sagarmatha, 12. X. 1979 (M. OWADA); 4 ♂ 5 ♀, Dolangsa 2,600 m, Sindhu, Bagmati, 11. XI. 1979 (M. OWADA); 3 ♂ 5 ♀, Drumthali 2,420 m, Sindhu, Bagmati, 13. XI. 1979 (M. OWADA). The holotype and 23 paratypes are preserved in the National Science Museum (Nat. Hist.), Tokyo, and the



Figs. 2–3. Genitalia of *Lophotyna khumbuensis* sp. nov. —— 2. Male, holotype. —— 3. Female, a paratype.

remaining paratypes will be donated to the Natural History Museum, Tribhvan University, Kathmandu.

Distribution. East Nepal (Sagarmatha and Bagmati Zones).

Remarks. This species somewhat resembles *Lophotyna albirena* (Moore) in the wing pattern, but is easely distinguished from the latter species by the following points:— Basal portion of antenna and outer margin of tegula white, while they are of the same colour as the ground in *albirena*; forewing with fine orange maculation which is wanting in *albirena*; basal lines of cilia on both the wings not so prominent as in those of *albirena*.

Judging from the structure of male genitalia, this species seems to be related to *L. albirena* rather than to the other species of *Lophotyna*, in lacking the corona of cuculus, while in the other species, the cuculus has a series of short coronal spines on its ventral edge. However, the shapes of ampulla, succulus and aedeagus are quite different between this species and *L. albirena*.

References

BOURSIN, Ch., 1956. Über die Gattung *Lophotyna* HPS. (Lep. Phal. Zenobiinae). Nebst Beschreibung einer neuen Art aus Dr. H. HÖNES China-Ausbeuten und Angaben über *Hydraecia osseola* STGR. (=*hucherardi* MAB.). *Z. wien. ent. Ges.*, **41**: 298–301, pls. 30–32.

HAMPSON, G. F., 1910. Catalogue of the Lepidoptera Phalaenae of the British Museum, Vol. 9. xv+552 pp., 10 pls. London.

MOORE, F., 1867. On the lepidopterous insects of Bengal. *Proc. zool. Soc. Lond.*, **1867**: 44–98, pls. 6–7.

——— 1881. Descriptions of new genera and species of Asiatic nocturnal Lepidoptera. *Ibid.*, **1881**: 326–379.

WILTSHIRE, E. P., 1946. Middle East Lepidoptera—V. A new genus, a new species, and two new races from Iran, with taxonomic notes of other Persian Heterocera. *Proc. R. ent. Soc. Lond.*, (B), **15**: 118–128, pl. 1.